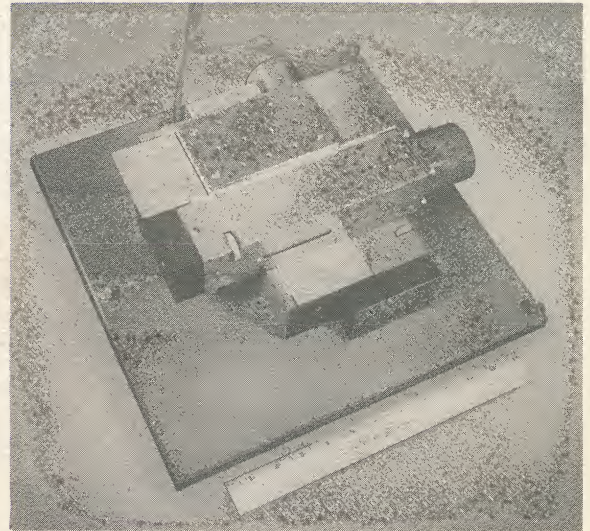


TAC SERIES XY-500

PROGRAMMABLE X-Y MICROPOSITIONER TABLE

DESCRIPTION

The new XY-500 Micropositioner Table is basically a motor-driven, moving table mounted on cross-slides for the accurate pre-programmed positioning in the X-Y plane of small parts such as transistors or microcircuits. To meet two distinct industry requirements, TAC has made available both step-and-repeat programming for scanning an area, and point-to-point programming for the intricate movements needed by welding, bonding, etc. Each table stage is moved by a motor-driven, high-precision lead screw with anti-backlash devices. Both models may be equipped optionally with the new mechanized vertical Z-stage and an electrically isolated vacuum chuck.

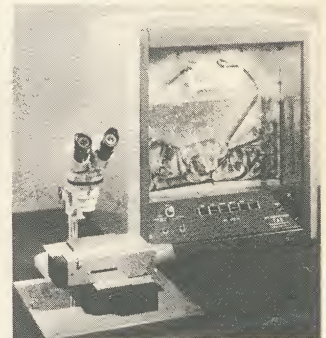


MODEL XY-501 - - - STEP-AND-REPEAT PROGRAMMING

The Model XY-501 is intended for repetitive-type bonding, probing operations on planar devices, microcircuit slices or grid patterns. Starting from a reference position, the table may be programmed to: (1) step-and-repeat automatically with great precision in the "X" direction; (2) after a preset number of steps, to index once in the "Y" direction; and then (3) to re-step all over again along the new "Y" position. Both the abscissa and ordinate steps and indexes are adjustable and preset. Thus, the table could be started at one corner of a slice and automatically cover the entire grid pattern. The XY-501 comes completely equipped with manual and automatic controls mounted in the cabinet, and the two axis XY-500 table.

MODEL XY-533 - - - POINT-TO-POINT PROGRAMMING

The Model XY-533 is used for point-to-point positioning on microcircuit or transistor chips or slices where a series of probing, welding, bonding, etc., operations are to be performed on a programmed basis in a microcircuit pattern or from pattern to pattern. A standard 8 channel tape reader is used to control the table motion. To maximize speed, both X and Y stages operate simultaneously. All X-Y point locations are based on the starting reference point and the location errors are non-cumulative. The standard tape tumble box will handle some 25 feet of endless tape, representing typically some 60 points or 1.5 inches of table travel. For more complex programs a tape spooler can be added at any time. The XY-533 comes completely equipped with tape reader and all manual/automatic controls mounted in a separate cabinet plus the basic two axis XY-500 table.



TAC

T R A N S I S T O R A U T O M A T I O N C O R P .

design and manufacture of automated test equipment and production machinery

18 MOULTON STREET, CAMBRIDGE, MASSACHUSETTS 02138

Telephone 617 KI 7-1590

SPECIFICATIONS

BASIC TABLE

Accuracy	± 95 micro-inch/inch travel
Speed	0.150 in./second
Resolution (smallest increment)	0.0005 in.
Total Travel, X-Direction	2 in. (other available on
Y-Direction	2 in. special order)
X motion to Y motion perpendicularity	± 20 seconds
Dimensions of Stage Overall	12 in. x 12 in x 5 in. high
Table Working Surface	3 in. x 5 in.

Controls

XY-501

XY-533

Type of Travel	Step-and-Repeat Indexing	Point-to-Point
Programming	Dial Switches and limit switches	Punched Tape Reader with Tumble Box
Table	Model XY-500	Model XY-500
Panel Controls	$\pm X \pm Y$ Manual-Automatic	$\pm X \pm Y$ Manual-Automatic
Power Supply	115 volt, 50 or 60 cps, 1 ph.	

OPTIONAL FEATURES

1. Microscope — Monocular to 50X with cross-hair reticle or stereo-zoom.
2. Basic Table with speed of 0.3 inches/sec. and .001-inch increments.
3. Rotary Stage — Manual or motorized and tape controlled.
4. Vacuum Chuck, electrically isolated.
5. Vertical "Z" Stage — automatically operated, for probing or welding. Travel time: 0.1 sec. can make 10,000 probes or welds per hour.
6. X-503 single axis only with controls available.
7. Closed-Looped Feedback — Position feedback to assure proper position. Signal output when proper position is arrived.
8. Digital position read out and display.
9. Tape Spooler for XY-533 for more complex programs.
10. Tape Punch — Special tape punch for making table program. TAC also performs tape punching as a regular service.
11. Special Applications — Upon request special additional operations can be attached to table, such as: automatic test probes, thermo-compression bonder, micro-welder.

OTHER TAC PRODUCTS FOR HIGH SPEED TESTING:

- XY-540 Automatic Probing Machines for testing transistors and microcircuits in slice stage.
- DS-10 Dice Classifier
- DC-10 Diode Classifier
- TC-10 Transistor Classifier

RELIABILITY IN AUTOMATION



PROGRAMMABLE POINT TO POINT
XY MICRO POSITIONER TABLE
MODEL "XY-533"
(Set up for micro welding)

TRANSISTOR AUTOMATION CORP.

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TAC SERIES XY-500

PRICE SCHEDULE

COMPLETE SYSTEMS

NOV. 1964

<u>Model</u>	<u>Title</u>	<u>Price</u>
XY-500	XY slides complete with drive motors . . .	\$3,300.00
XY-501	XY slides complete with drive motors with controls for step-and-repeat programming	\$5,500.00
XY-533	XY slides complete with drive motors with controls for point-to-point pro- gramming (Punched tape reader with tumble box)	\$7,200.00
XY-540	Fully Automatic Probing Machine con- sisting of XY-501 with: Vertical 'Z' stage, rotary vacuum chuck, 2 probes, 2 inkers, slice alignment microscope , stereo viewing microscope	\$8,500.00
XY-547	Slice-Edge Sensor	\$400.00

OPTIONAL ITEMS

XY-503	Single axis slide complete with drive motor, 2" travel, with 3" x 5" working surface	\$1,500.00
XY-551	Vertical 'Z' stage for true vertical movement without side play. Mounts on working surface of slides. Max. move- ment - .020" Travel time - 0.1 second . .	\$750.00

RELIABILITY IN AUTOMATION

OPTIONAL ITEMS

<u>Model</u>	<u>Title</u>	<u>Price</u>
XY-550	Probe head with tungsten carbide point. Built-in miniature joy-stick for XY positioning besides a 'Z' motion screw. Point pressure adjustable in the 2 to 20 grams range	\$135.00
XY-554	Inking head (electrically operated) with built-in miniature joy-stick for XY positioning and 'Z' motion screw. Complete with a Leroy long point pen electrically isolated	\$175.00
XY-556	Rotary stage (manual) - 1 $\frac{1}{2}$ " dia. Full 360° coarse rotation with \pm 5° fine ad- justment. Electrically isolated top . . .	\$200.00
XY-557	Rotary stage, same as XY-556 but with a built-in vacuum chuck	\$225.00
XY-505	Feedback unit, shaft position encoder mounted on table drive shaft for closed loop operation. Together with electronic amplifier (must be order with system). Per axis.	\$200.00
XY-535	Tape spooler, for unidirectional reader with fast rewind, for 10 $\frac{1}{2}$ " dia. spools. .	\$950.00
XY-537	Tape punch with automatic controls for pre-set counting	\$850.00
XY-539	Metalized Mylar tape, spool of 1,000 feet.	\$50.00
XY-561	Rigid base for XY table with leveling screws. Will accommodate column which is described below: Size - 15" wide x 20" deep	\$175.00
XY-563	Vertical column, attaches to top of XY-561 base for tooling mounting	\$125.00

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Telephone 617 KI 7-1590

February 25, 1965

Systems Const.
Box 1546
Poughkeepsie, N. Y.

Attn: T. H. Nelson

Dear Sir:

In accordance with your recent request, I am enclosing literature on the following:

- ☐ Test Equipment
- ☐ Welders
- ☐ Glass Sealers
- ☐ Dice Classifiers
- ☒ Automatic Indexing Tables
- ☐ Automatic Probing Machines
- ☐ ADL Ball Rebound Tester

If there is any further information you require, please call me.

Yours truly,

TRANSISTOR AUTOMATION CORP.

M. Heister fj

Encl.

RELIABILITY IN AUTOMATION